

## REMARKS

Claims 3, 6-7, 9-10, 12-14, 24-25, 28, 31-35, 37-39, and 42 are pending,  
claims 10, 12, 25, 28, 31-33 and 42 are allowed, claims 13-14, 34-35 and 37 are  
rejected, claim 38 is objected to, claims 3, 6-7, 9, 24 and 39 have been  
5 withdrawn from further consideration, and claims 1-2, 4-5, 8, 11, 15-23, 26-27,  
29-30, 36 and 40-41 were previously canceled.

Claims 13, 34 and 38 are amended and claims 3, 6-7, 9, 24, 35, 37 and 39  
are canceled hereby.

Applicants acknowledge the withdrawal by the Examiner at page 2 of the  
10 Office Action mailed 18 February 2004 of the restriction requirement as formerly  
applied to claim 33 and the indication therein that claim 33 has been allowed, for  
which courtesy the Examiner is thanked.

Responsive to the rejection of claim 34 under 35 U.S.C. §112, second  
paragraph, for depending from a canceled claim, Applicants have amended claim  
15 34 to depend from allowed claim 32. Applicants submit that amended claim 34 is  
now in allowable form.

Responsive to the rejection of claims 13 and 14 under 35 U.S.C. §103(a)  
as being unpatentable over Blanchard in view of the admitted prior art Applicants  
have amended claim 13.

20 Claim 13 recites in part "said source segments having respective and  
predetermined lengths, said predetermined lengths being dependent at least in

part upon the proximity of said source segments to a center of the IGBT die, and said predetermined lengths being relatively shorter proximate to the center of the IGBT die". (*Emphasis Added*).

The Examiner characterizes the above-quoted portion of claim 13 as  
5 including a product-by-process limitation (i.e., the limitation that the predetermined lengths are dependent at least in part upon the proximity of the source segments to a center of the IGBT die). Applicants respectfully submit that claim 13 does not contain a product-by-process limitation.

A product-by-process claim (or limitation) defines a product in terms of the  
10 method used to manufacture that product. A product-by-process claim (or limitation) defines the claimed product in terms of the process by which it is made. (*In re Luck*, 476 F.2d 650, 177 USPQ 523 (CCPA 1973), and see, MPEP 2173.05(p)). Such claims have a general format of, for example: a device manufactured by a process comprising x, y, and z. Claim 13 does not recite any  
15 process or process step whatsoever. Claim 13, therefore, is simply not a product-by-process claim. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claim 13.

Further, claim 13 is amended hereby to include the limitation that the channel resistors (or source segments) are relatively shorter proximate the  
20 center of the die. The present Specification teaches that the channel resistors (or source segments) may be purposefully made to different lengths depending

upon their location on the die and the desired local current density at that location. In general, shorter length source segments are preferable closer to the center of the die to promote the thermal ballasting effect of the present invention. (see page 10, lines 24-26 of the present specification). Applicants submit that no  
5 combination of the cited references teaches, discloses or suggests such a limitation.

For the foregoing reasons, Applicants submit that claim 13 is now in condition for allowance and respectfully request same.

Responsive to the rejection of claims 35 and 37 under 35 U.S.C. §103(a)  
10 as being unpatentable over Blanchard in view of Applicants' admitted prior art and further in view of U.S. Patent No. 5,119,153 (Korman), Applicants respectfully point out that claims 35 and 37 are canceled hereby.

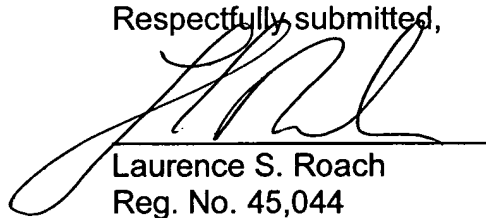
The Examiner indicated that Claim 38 would be allowable if rewritten in independent form to include all of the limitations of its base and any intervening  
15 claims, for which courtesy the Examiner is thanked. Applicants have rewritten claim 38 keeping in mind the comments offered by the Examiner, and submit that claim 38 is now in allowable form. Accordingly, Applicants respectfully request withdrawal of the objection and allowance of the claim.

For all the foregoing reasons, Applicants submit that the pending claims  
20 are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no

combination of the cited references teaches, discloses or suggests the subject matter of the pending claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

- 5 The Examiner is invited to telephone the undersigned in regard to this Amendment and the above identified application.

19-APR-04  
Date

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